

PanAmerican Seed.

# **NEW FOR** 2021

As your global partner, PanAmerican Seed® provides you with the right products that will work for you, customer service and technical support where and when you need it, and the **seed quality** to help your business succeed.

For 2021, we have an exciting selection of varieties to provide you with growing solutions, like Beacon® Impatiens with high resistance to Impatiens downy mildew, providing season-long colour for the garden. We are also pleased to introduce the Artisan™ Collection to **elevate** seed Echinacea to F1 quality. Plus, our NEW Kitchen Minis® Collection includes edible potted vegetable plants to entice our newest consumers into gardening.

Visit panamseed.com for more product information and growing culture on these and all our go-to varieties to enhance your program.



WAVE P. 4



**ANNUALS P. 8** 





More to celebrate with Wave®!

Wave, the world's best-selling petunia, celebrates 25 years of innovative colour and superior garden performance in 2020. With a targeted anniversary campaign, POP and retail promotions, the party for Wave petunias continues in 2021 and beyond!

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Celosia Foliage

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MEET OUR **COVER** STARS!

# FRONT:

Artisan™ Collection Red Ombre Echinacea Beacon® Series Impatiens Wave® Carmine Velour Petunia

Kitchen Minis® Siam Edible Potted Tomato





# Bold and creative!

You'll always stand out in the petunia market with Easy Wave. Bring in a wide array of decorator colours. Put the huge versatility to work - they're perfect for solo and mixed planters and baskets, gardens and landscapes. Best of all, these all-season salesmakers deliver customer-pleasing performance all Summer.



Rose Fusion

**SPREADING PETUNIA** • Petunia x hybrida

# Easy Wave® Series F<sub>1</sub>



PRO LANDSCAPE PERFORMER

**Height:** 6 to 12 in./15 to 30 cm **Spread:** 30 to 39 in./76 to 99 cm **Flower size:** 2 to 3 in./5 to 8 cm

Seed supplied as: Pelleted

Plug crop time: 4 to 6 weeks Transplant to finish: Spring 6 to 7 weeks, Summer 4 to 5 weeks

- Exceptional uniformity means simplified production, maximized plug yields and the ability to meet every ship date for every colour. Lets you grow specialty mixes, too!
- More mounded with more controlled spread than Wave® varieties.
- Recommended in Wave branded packaging: 6-in./15-cm pots, premium quarts and gallons, 306 premium packs with handle, hanging baskets.

New Rose Fusion Mid-rose blooms with deep rose veins. Short-day flowering requirement of 9 hours creates early-season sales opportunities.



**Rose Fusion** 



# Purple Tie Dye

# NEW

**Purple Tie Dye** 

# The best for baskets

You've never seen petunia hanging baskets like these each Shock Wave plant is blanketed with masses of colour from the amazing number of petite, high-impact flowers. Start your Wave® sales early with the early-to-flower spreading petunia series that bounces back from overhead watering and Spring showers.

SPREADING PETUNIA continued

# Shock Wave® Series F1



**Height:** 7 to 10 in./18 to 25 cm **Spread:** 20 to 30 in./51 to 76 cm **Flower size:** 1.5 to 2 in./4 to 5 cm

Seed supplied as: Pelleted

Plug crop time: 4 to 6 weeks Transplant to finish: Spring 5 to 6 weeks, Summer 4 to 5 weeks

- Blooms in a 4 to 6-day window.
- Rebounds faster from overhead watering and rain than other petunias - stays fresher-looking at retail and outdoors.
- Performs equally well in small spaces, baskets, containers and mixed combos.
- Mounded, spreading plants are similar in shape and just as easy to manage as Easy Wave® petunia.
- Recommended in Wave branded packaging: 4-in./10-cm pots, premium quarts, 306 premium packs with handle, hanging baskets.

New Purple Tie Dye Inconsistent purple-blue and white bicolour pattern is appealing to consumers. Pattern changes based on temperature, light levels and PGRs used; daminozide use will result in more white showing on the blooms. 10.5-hour daylength required.

# Twice the spread...double the colour!

Wow 'em with Cool Wave - hands down, it's the fastest-growing, longest-lasting, truly trailing pansy for Spring and Autumn. One trip to the garden centre for lush baskets or pots for in-ground planting is enough to convince anyone that Cool Wave is a cool-season gardener's dream.



Red Wing Improved / Sunshine N' Wine Improved

# SPREADING PANSY O

Viola x wittrockiana

# Cool Wave® Series F1



**Height:** 6 to 8 in./15 to 20 cm **Spread:** 24 to 30 in./61 to 76 cm **Flower size:** 2 to 2.5 in./5 to 6 cm

Seed supplied as: Primed

Plug crop time: 4 to 5 weeks Transplant to finish: Spring 6 to 7 weeks, Autumn 4 to 5 weeks

- The best-performing spreading pansy series delivers *easy spreading colour* for Spring and Autumn, so you can extend your growing and selling season for the popular Wave® Brand.
- More vigorous with the most prostrate habit of any spreading pansy - great in combos and as groundcover.
- Superior overwintering hardiness Cool Wave is the earliest pansy to return in the Spring.

New Red Wing Improved Offers better branching and a more mounding habit that matches the newest varieties in the series. Also known as Sunshine 'N Wine in North America.



Red Wing Improved / Sunshine N' Wine Improved

# ANNUALS

# Your no-pinch, low-hassle angelonia

Serena and companion
Serenita are the only
seed angelonias on the
market, giving you the
premium results you
expect from vegetative
varieties, with less labour
and more efficiency.
Both fit into warm
bedding production...
are perfect for grower
choice premium
containers...and excel
in landscapes, thanks to
their high durability.



Serena Blue Improved



N E W
Serena Purple Improved



Serenita Lavender

# ANGELONIA O Angelonia angustifolia

# Serena® Series F1



**Height:** 16 to 20 in./41 to 51 cm **Spread:** 12 to 14 in./30 to 36 cm

Seed supplied as: Pelleted

Plug crop time: 5 to 6 weeks Transplant to finish: 8 to 9 weeks

- Serena fills gardens, landscapes and mixed containers with unique dimensional colour.
- Care-free, continuous bloomer performs well under a wide range of conditions.
- Durable series is a perfect choice for consumers looking for waterwise, heat-loving plants.
- Plants grow up to 50% larger in Florida, Southeast Asia and similar southern climates.

Mississippi Medallion Award, Dallas Arboretum FlameProof Award, Louisiana Super Plants Award

New Blue Improved This light blue flower with a white throat is a lighter blue colour than original Blue, but is closer to a true blue. It is one week earlier to flower, and it offers more uniformity and improved production.

**New Purple Improved** Features a deeper, more intense purple colour than original Purple, with earlier flowering and improved production.



Serena Blue Improved



Serena Purple Improved

# Serenita® Series F1



**Height:** 12 to 14 in./30 to 36 cm **Spread:** 12 to 14 in./30 to 36 cm

Seed supplied as: Pelleted

Plug crop time: 5 to 6 weeks Transplant to finish: 8 to 9 weeks

- Serenita has all the good looks, durability and easy production of Serena - with a few additional benefits.
- Excellent solution where shorter and more manageable material is needed.
- Peak performer in very hot/humid night temps like Florida, southeast Asia and similar southern climates.
- Great for high-density production.
- Grow Serenita with less to no PGRs for cost savings.

New Lavender This new colour in the Serenita series offers true lavender flower colour. It is one week earlier to flower compared to Lavender Pink, with fast secondary flowering and good fill.



NEW

Sol Lizzard Leaf





Sol Lizzard Leaf

# **Sun-loving** foliage celosia brings colour and texture to containers

With limited options for attractive foliage plants from seed, growers often turn to coleus to add interest and texture to containers. The Sol™ Collection is a fantastic new foliage celosia with relatively fast production time and no Downy mildew issues. It holds well at retail and expands the options for consumers looking for sun-loving foliage accent plants for patio planters with a different texture and look, as well as for quick-growing, low, shrub-like plants that look great at the front of the border.

# **CELOSIA FOLIAGE**

Celosia argentea

# New Sol™ Collection Gekko Green

**Height:** 10 to 14 in./25 to 36 cm **Spread:** 10 to 16 in./25 to 41 cm

Seed supplied as: Pelleted

Plug crop time: 3 to 4 weeks Transplant to finish: Spring, 7 to 10 weeks

- An attractive new foliage celosia collection for the market!
- Two distinct bicolour foliage patterns are featured in the collection.
- Offers relatively fast production time and no Downy mildew issues.
- NEW Gekko Green's foliage tends to be more green when kept indoors, and it turns to burgundy when the plant is left outdoors for at least 1 to 2 weeks.

# **New** Sol™ Collection **Lizzard Leaf**

Height: 10 to 14 in./25 to 36 cm **Spread:** 10 to 16 in./25 to 41 cm

Seed supplied as: Pelleted

Plug crop time: 3 to 4 weeks Transplant to finish: Spring, 7 to 10 weeks

- Foliage tends to be more green when kept indoors, and it turns to burgundy-red when the plant is left outdoors for at least 1 to 2 weeks.
- NEW Lizzard Leaf's foliage tends to curl due to genetic factors and can be modified by the climate conditions found in different locations in different degrees, in both indoor and outdoor environments.



First Flame Yellow Improved Celosia

# **CELOSIA** • Celosia plumosa

# First Flame™ Series



PRO LANDSCAPE PERFORMER

Height: 10 to 14 in./25 to 36 cm Spread: 10 to 16 in./25 to 41 cm Seed supplied as: Pelleted

Plug crop time: 3 to 4 weeks Transplant to finish: 8 to 10 weeks

- Excellent, brightly coloured Summer crop finishes 10 to 14 days earlier than competing varieties to reduce production costs.
- Branches like a regular *C.* plumosa to produce full blooms.
- Uniform across all colours for a fuller look in containers.
- Ideal for Asian and southern markets.
- Makes a great border plant; also good in containers.

New Yellow Improved Fits the series well for timing; original Yellow was later to flower. Also offers improved leaf quality compared to original Yellow's ruffled leaves.



Corona Salmon Red Eye Dianthus



Corona Salmon Red Eye Dianthus



Corona Salmon Red Eye Dianthus

# Crowned with huge flower power

Wow 'em with the biggest blooms of any dianthus of this type... exceptional flower form...and a palette of showstopping colour choices.

Corona adds a regal touch to cool-season landscapes, gardens and patio planters.

# **DIANTHUS** O

# Corona™ Series F<sub>1</sub>



**Height:** 8 to 10 in./20 to 25 cm **Spread:** 8 to 10 in./20 to 25 cm **Flower size:** 2 to 3 in./5 to 8 cm

Seed supplied as: Pelleted

Plug crop time: 4 to 6 weeks Transplant to finish: 6 to 8 weeks

- At 2 to 3 in./5 to 8 cm, Corona's blooms are larger than the competition, plus it offers uniform flowering time and habit.
- Produces multiple flowers on a compact, mounded plant.
- Gives its best performance in cool weather, making it great planted along with other coolseason annuals such as pansies.

**New Salmon Red Eye** Offers a consistent bicolour pattern of salmon/coral with a darker red centre.





Beacon Coral (L) outperforms a susceptible competing variety (R), at Venhuizen field trials in 2018.



Coral US PAF; US 10,285,362; PCT



Bright Red US PAF; US 10,285,362; PCT



White US PAF; US 10,285,362; PCT



Red White Mixture US PAF; US 10,285,362; PCT



Orange US PAF; US 10,285,362; PCT



Select Mixture US PAF; US 10,285,362; PCT



**Salmon** US PAF; US 10,285,362; PCT

IMPATIENS • • • Impatiens walleriana

# Beacon® Series F1



**Height:** 15 to 20 in./38 to 51 cm **Spread:** 12 to 14 in./30 to 36 cm **Flower size:** 1.25 to 1.5 in./ 3 to 4 cm

Seed supplied as: Raw

Plug crop time: 4 to 5 weeks Transplant to finish: 3 to 4 weeks

- Beacon impatiens exhibits high resistance to the currently known and widely prevalent populations of *Plasmopara obducens*, which cause Impatiens downy mildew.
- Beacon impatiens offers the opportunity to bring back into production a well-known, in-demand, easy-to-grow and versatile product for increased sales.
- Extensive trialing has proven that Beacon impatiens provides genetic high resistance to IDM without the use of chemicals, and it can be produced how impatiens used to be grown without fungicides or any special care regimen.
- With a plant structure, flowering time, flower size and crop culture that is similar to Super Elfin, Beacon impatiens is easy to incorporate into production planning.
- Offers season-long colour, and it brings back fast-filling colour to gardens and landscapes.

New Bright Red A warm-toned red on upright mounded, moderately vigorous plants with mid-green foliage. Plant vigour is slightly larger than Super Elfin XP Red, and the flower size is slightly smaller.

Violet Shades US PAF; US 10,285,362; PCT

**New Coral** Coral-pink flowers on mid-vigour, mounded plants with bright green foliage.

New Orange A bright, clean orange on moderate-vigour, upright mounded plants with bright green foliage. Plant height, vigour and flower size are similar to Super Elfin Bright Orange.

**New Salmon** A warm salmonorange flower on mid-vigour, mounded plants with bright green foliage.

New Violet Shades Shades of bright violet and burgundy-violet on moderate-vigour, upright mounded plants with mid-green foliage. More vigorous with the same flower size as Super Elfin XP Violet.

**New White** Pure white flowers on moderately vigorous, upright mounded plants with mid-green foliage. Features more plant vigour with the same flower size as Super Elfin XP White.

**New Red White Mixture** Bright Red, White.

**New Select Mixture** Bright Red, Coral, Orange, Salmon, Violet Shades and White.



**Orange** US PAF; US 10,285,362; PCT



**White** US PAF; US 10,285,362; PCT



Violet Shades US PAF; US 10,285,362; PCT



Marvel II Orange



NEW

Marvel II Gold



Marvel II Yellow



Marvel II Orange

# AFRICAN MARIGOLD Tagetes erecta

# Marvel II™ Series F<sub>1</sub>

**Height:** 16 to 18 in./41 to 46 cm **Spread:** 10 to 12 in./25 to 30 cm **Flower size:** 3 to 3.5 in./8 to 9 cm

**Seed supplied as:** Coated, De-tailed

Plug crop time: 3 weeks Transplant to finish: 6 to 7 weeks

- This new intermediate-type African marigold offers improved branching, earliness, flower size and a brighter flower colour.
- Series is uniform under both short and long days.
- Also available: New Mixture

# Make your life easier

Matrix is your best option for longer days and warmer growing. Uniformity of timing and plant habit simply can't be beat by any other varieties in the marketplace. Only Matrix has a tight bloom window in Autumn production that allows every colour to ship the same week.



**Matrix Red Wing Improved Pansy** 

PANSY • • Viola x wittrockiana

EXTRA-LARGE

# FLOWERED PANSY Matrix® Series F1



Height: 8 in./20 cm

Spread: 8 to 10 in./20 to 25 cm Flower size: 3.5 in./9 cm Seed supplied as: Raw, Primed

Plug crop time: 5 weeks

Transplant to finish: Spring 6 to 8 weeks, Autumn 4 to 6 weeks

- Matrix offers less handling, less waste and exceptional holding power for higher profitability.
- 7-day bloom window across all colours in Autumn production makes scheduling and growing easy.
- Extra-large flowers hold up to the heat and PGR stress in Summer/ Autumn production.
- Low-maintenance series gives pro landscapers the best choice for uniform colour striping, plus the most flowers per plant of any large-flowered pansy.

**New Red Wing Improved** Offers better branching and a more mounding habit.



Glitterati Red Star Pentas US PAF

PENTAS O
Pentas lanceolata

# Glitterati™ Series F<sub>1</sub>

Height: 12 to 22 in./30 to 56 cm Spread: 10 to 18 in./25 to 46 cm Seed supplied as: Pelleted

Plug crop time: 6 to 7 weeks Transplant to finish: 8 to 10 weeks

- A sure winner! Combines a unique look for pentas, while still offering the heat/humidity performance this class is known for.
- Distinctive star pattern combines easily with other varieties, adding an exciting component for warm/hot season combinations.
- Finishes fast for speed to market, and follow-up blooming keeps the plants in full colour and looking good all season.

**New Red Star** Distinctive combination of red and white with a star pattern that is great for Summer patio pots and combinations. Complements Glitterati Purple Star, which was introduced in 2018.





NEW

Lancelot

SALVIA O Salvia canariensis

# **New Lancelot**

**Height:** 36 to 42 in./91 to 107 cm **Spread:** 24 to 30 in./61 to 76 cm

Seed supplied as: Raw

Plug crop time: 4 to 5 weeks Transplant to finish: 5 to 6 weeks, foliage only

- A unique plant for the border.Produces silvery-white, felted
- Produces silvery-white, felted leaves plus lavender flowers in July, with rosy-lavender bracts and a pleasant sage fragrance.
  A water-wise plant and a great pollinator plant, attracting hummingbirds, bees and butterflies.

# Make your mark on vinca sales!

The art of plants comes alive on every Tattoo bloom - each petal looks like it is inked or airbrushed with soft brush strokes of dark purple. Adding these novelties to your lineup shows that you have your finger on the pulse of what today's gardener really wants: bold, fun, head-turning. Tattoo...without a doubt, the most unique vinca on the market!



**Tattoo American Pie Mixture** 





Valiant Magenta US PAF

AERIAL PHYTOPHTHORA-RESISTANT UPRIGHT VINCA

# Valiant™ Series F<sub>1</sub>



**Height:** 14 to 20 in./36 to 51 cm **Spread:** 10 to 12 in./25 to 30 cm

Seed supplied as: Raw

Plug crop time: 5 weeks Transplant to finish: 3 to 4 weeks

- The Valiant series is more vigorous than the competition AND it comes with disease resistance (IR\*) to aerial Phytophthora under field conditions a "Win-Win" for landscape programs.
- Makes well-branched, marketready plants with large flowers that show off high-impact colour at point of sale and in the landscape.
- Superior hybrid vigour allows Valiant vinca landscapes to better survive environmental stresses such as sun, heat, drought, salt and cool/ damp conditions.

**New Apricot Improved** A stronger colour.

**New Valiant Magenta** A new colour for the series.

\*Intermediate resistance (IR):
Plant varieties that restrict the growth and/or development of the specified pest and/or the damage it causes but may exhibit a greater range of symptoms or damage compared to high resistant varieties. Intermediate resistant plant varieties will still show less severe symptoms or damage than susceptible plant varieties when grown under similar environmental conditions and/or pest pressure Adopted by the ISF Vegetable and Ornamental Crops Section in May 2017.

# VINCA Catharanthus roseus UPRIGHT VINCA

# Tattoo™ Series

**Height:** 10 to 14 in./25 to 36 cm **Spread:** 6 to 8 in./15 to 20 cm

Seed supplied as: Raw

Plug crop time: 5 weeks Transplant to finish: 5 to 6 weeks

- Very floriferous and wellbranched plants display one-of-akind flowers.
- Tight flowering window with an easy-to-grow, uniform, upright habit across all colours.
- Outstanding in hot and sunny conditions.

NOTE: Tattoo blooms display the best colour contrast under warm conditions with moderate light; colours lighten with increased temperatures and light. Grown under cooler conditions and lower light, colours appear darker overall with less contrast and more purple colouration being expressed.

**New Blueberry** A unique colour perfect for combining with other plants to create heat-loving red, white and blue mixes.

New American Pie Mixture Includes NEW Tattoo Blueberry, plus two Pacifica XP varieties, Really Red and White.



Tattoo Blueberry US PVPAF



**Quicktime Yellow Blotch** 

# NEW

**Quicktime Blue** 

# Shorter production time = cost savings

Flowering two weeks faster than comparable series, Quicktime allows you to sow your viola crop two weeks later and still ship on time in Spring. With reduced labour and less heat needed in the greenhouse, the cost savings are quick to add up!

VIOLA • Viola cornuta

# Quicktime™ Series F1

Height: 6 to 8 in./15 to 20 cm **Spread:** 6 to 8 in./15 to 20 cm Flower size: 1 to 1.5 in./3 to 4 cm

Seed supplied as: Primed

Plug crop time: 4.5 to 5 weeks Transplant to finish: Spring 5 to 6 weeks, Autumn 3 to 4 weeks

- Early-blooming, free-flowering plants provide bright colour in early
- Spring and Autumn gardens.

  Reduced daylength sensitivity and free-flowering selection criteria make Quicktime viola the best option for saving growing time in cold-grown, overwinter-produced viola crops.
- Compact plants have a uniform habit and are covered in 1 to 1.5-in./3 to 4-cm blooms.
- A well-branched, full-bodied plant that fills out the pot or pack.
- Features 'Hyperflora' flowering power, so it has multiple blooms at first flower and continues with fast secondary and tertiary flowering.

New Blue Adds a key core colour to the series.

New Yellow Blotch Brings a key colour to the series, with a medium yellow hue.



Double Zahara Yellow Improved US PVPAF

**ZINNIA** O Zinnia marylandica

# Double Zahara™ Series



**Height:** 16 to 20 in./41 to 51 cm **Spread:** 16 to 20 in./41 to 51 cm

Seed supplied as: Raw

Plug crop time: 3 weeks Transplant to finish: Spring 8 to 9 weeks, Summer 5 to 6 weeks

- The only fully double, diseaseresistant zinnia series makes a huge colour show!
- Unlike Double Zahara, the competition has smaller, semi-double flowers.
- Award-winning, all-season performance and durability in landscapes and containers, especially in sunny, hot and dry conditions.
- Intermediate size is perfect for mid-level plantings in the landscape. Works well in containers, too.

New Yellow Improved Larger flower diameter, brighter yellow colour and improved vigour to match the newest varieties in the series, like Salmon and Fire.



Double Zahara Yellow Improved US PVPAF

# **Kieft**Seed

# PERENNIALS









**Dasante Blue Delphinium** 

Barranca Deep Rose Arabis



Gold Rush Aurinia

**Barranca Deep Rose Arabis** 

ARABIS

Arabis blepharophylla

# **New Barranca™ Series**

Height: 6 to 8 in./15 to 20 cm **Spread:** 7 to 8 in./18 to 20 cm Flower size: 0.5 in./1 cm

USDA Hardiness Zones: 4a to 9a (-30 to 20°F/-34 to -7°C minimum temperatures)

Seed supplied as: Raw

Plug crop time: 6 to 8 weeks Transplant to finish: 26 to 32 weeks

- The Barranca Series offers two colours in A. blepharophylla, producing a highly uniform crop that is short-stemmed with a lot of flower power.
- The series includes Deep Rose and Pink (violet pink), a unique colour in this floriferous, early-Spring flowering perennial.

New Pink 3 to 5 days earlier than Deep Rose, with more clear green foliage.

AURINIA O Aurinia saxatile

# **New Gold Rush**

**Height:** 5 to 8 in./13 to 20 cm **Spread:** 5 to 8 in./13 to 20 cm Flower size: 0.5 to 3 in./1 to 8 cm

USDA Hardiness Zones: 3a to 9a (-40 to 20°F/-40 to -7°C minimum temperatures)

Seed supplied as: Raw

Plug crop time: 6 to 7 weeks Transplant to finish: 26 to 32 weeks

- Shorter-stemmed Aurinia features a more uniform plant habit and earlier flowering than the competition.
- Evergreen early-Spring flowering perennial forms neat rosettes.

**DELPHINIUM** • Delphinium elatum

# Dasante Blue F1 (Reintroduction)

**Height:** 28 to 34 in./71 to 86 cm **Spread:** 10 to 12 in./25 to 30 cm

USDA Hardiness Zones: 4a to 8b (-30 to 15°F/-34 to -9°C minimum temperatures)

A First-Year-Flowering Perennial.

Seed supplied as: Raw

Plug crop time: 6 to 7 weeks Transplant to finish: 11 to 13 weeks

- Dasante Blue shows off vibrant true blue flowers with light purple accents and white bees.
- The grower-friendly, uniform plants are more compact, more responsive to PGRs and naturally earlier than other D. elatum types.
- Easy-care, cool-season crop can be grown with little or no heat for energy savings.
- Plants ship well, with more plants per rack in flower than any other delphinium for tremendous retail impact.
- Best for gallons with 3 plants per
- Suitable for greenhouse, field or garden cut flower production.



**Purple White** 



Red Yellow

AQUILEGIA • Aquilegia x hybrida

# New Earlybird™ Series F1

**Height:** 9 to 11 in./23 to 28 cm **Spread:** 8 to 10 in./20 to 25 cm Flower size: 2 to 3 in./5 to 8 cm

**USDA Hardiness Zones:** 3a to 9b  $(-40 \text{ to } 25^{\circ}\text{F}/-40 \text{ to } -4^{\circ}\text{C minimum})$ temperatures)

A First-Year-Flowering Perennial.

Seed supplied as: Raw

Plug crop time: 6 to 9 weeks Transplant to finish: 12 to 16 weeks (20 to 30 weeks overwintered)

- Strong, new colours and colour combinations spark new interest in Aquilegia!
- This new series has a low cold requirement and short juvenility for growing in warm Winter climates.
- Features a controlled habit, with relatively short stems on wellmounded plants.
- A flowering window of 10 to 12 days, plus a short harvest window, make it an excellent choice for early-Spring programs.

  • NEW Purple White, Purple
- Yellow and Red Yellow are unique colours in F1 Aquilegia.

New Blue White Features a slightly more slender plant habit compared to the rest of the series.

New Purple White Flowers 2 to 3 days earlier than the rest of the

New Purple Yellow Flowers 5 to 7 days later than the series average, and is 2 in. (5 cm) taller.























**Red Ombre** US 7,982,110



**Red Ombre** US 7,982,110

The first F1

**Echinacea** 

just better!



**Soft Orange** US 7,982,110

# hybrid seed collection is

The NEW Artisan™ Collection elevates seed Echinacea to offer consistency of plant structure for uniform and highly branched, full plants. It also provides uniformity of flowering, so all plants are ready to sell at the same time. Plus, the benefit of a seed input provides flexibility for production so it fits better in your schedule.



# New Artisan™ Collection F<sub>1</sub>

Height: 16 to 28 in./41 to 71 cm **Spread:** 10 to 25 in./25 to 64 cm Flower size: 3 to 4 in./8 to 10 cm

**USDA Hardiness Zones:** 4a to 10b  $(-30 \text{ to } 35^{\circ}\text{F/-}34 \text{ to } 2^{\circ}\text{C minimum}$ temperatures)

A First-Year-Flowering Perennial.

Seed supplied as: Amplified

**Plug crop time:** 5 to 6 weeks Transplant to finish: 13 to 17 weeks

- The first F1 hybrid Echinacea collection from seed!
- Offers consistency of plant structure for a uniform, highly branched, full plant.
- Features uniform flowering, so all plants are ready to sell at the same
- Seed input provides flexibility for production and labour management.
- NEW Amplified seed form has been enhanced through proprietary processes.

**New Red Ombre** Flowers open red and soften in colour with age.

**New Soft Orange** Flowers open deep orange and soften as they mature.



**Soft Orange** US 7,982,110

# LOBELIA O

Lobelia x speciosa

# Starship™ Series F1

**Height:** 20 to 24 in./51 to 61 cm **Spread:** 8 to 12 in./20 to 30 cm

**USDA Hardiness Zones:** 6a to 10b (-10 to 35°F/-23 to 2°C minimum temperatures)

A First-Year-Flowering Perennial.

Seed supplied as: Pelleted

Plug crop time (288 tray): Scarlet, 7 to 9 weeks; all others, 8 to 10 weeks

Transplant to finish: 14 to 18 weeks

- Earlier flowering; improved branching; low stretch; uniform, controlled habit; and huge flower power assure a better-quality finished plant than the competition.
- Good Summer crop for landscape programs prefers higher temperatures, humidity and moisture.
- Good germination and plug yield.
- Versatile series works well from 5-in./13-cm pots to higher-value 1 and 2-gallon containers.
- Performs well in both annual and perennial combos.
- Attracts hummingbirds and butterflies.

New Blue This variety has a height of 24 to 28 in./61 to 71 cm, which is 6 to 8 in./15 to 20 cm taller than the rest of the series. It also has green leaves, in contrast to the bronze leaves of the other varieties.

**New Burgundy** Features the same habit as Scarlet and Deep Rose.

New Scarlet Bronze Leaf The most bronze-leafed variety in the series grows to 24 to 26 in./61 to 66 cm in height, about 4 to 6 in./13 to 15 cm taller than Scarlet, and is one week later to flower. Replaces Vulcan Red, which was 3 weeks later to flower than the series. Features an in-demand combination of deep bronze leaves with intense scarlet flower power.







Burgundy



Scarlet Bronze Leaf







Scarlet Bronze Leaf



# POTTED PLANTS

# **Grow these** mini vegetable plants inside or out!

The NEW Kitchen Minis® collection includes potted vegetable plants consumers can grow inside on a sunny windowsill a garden! They outside as tabletop These Kitchen Minis encourage consumers to grow and harvest their own homegrown vegetables all year

# **EDIBLE POTTED** TOMATO •

Solanum lycopersicum

# New Siam F<sub>1</sub>

Height: 7 to 9 in./18 to 23 cm **Spread:** 10 to 12 in./25 to 30 cm

# Seed supplied as: Raw

Plant benefits from being grown dry. Support fruit weight by inserting sticks close to the central stem at the time of flowering.

Fruit colour: Red Plug crop time (weeks): 2-3 Potting to sale (weeks): 10-12 **Pot size:** 5-6.5 in./13-17 cm **Fruit size:** 0.5 x 0.5 in./1.5 x 1.5 cm

# Kitchen Minis® **Edible Potted Vegetable Varieties**

# **Tomatoes**

• NEW Siam

# **Peppers**

- Adobo Cosmo
- Fresh Bites Orange, Red and Yellow • Hot Burrito
- Hot Fajita Hot Joker • Hot Lemon • Hot Tomato
- Piñata Tamale Taquito
- Yellow Tomato



Siam



Mega Revolution Scarlet Red with Light Eye Improved



Mega Revolution Select Mixture Improved

# **GERBERA** • Gerbera jamesonii

# Mega Revolution™ Series F1

**Height:** 6 to 10 in./15 to 25 cm **Spread:** 12 to 14 in./30 to 36 cm **Flower size:** 4 to 5 in./10 to 13 cm

Seed supplied as: Coated

Plug crop time: 6 to 7 weeks Transplant to finish: 8 to 10 weeks

- Produces manageable, largersized plants with very large flowers - beats competing series for colour range, bloom size and seed quality.
- Ideal for larger container programs.
- Supplied with industry-leading seed quality.

New Scarlet Red with Light Eye Improved Shorter flower stems, compact habit, better flower performance and a higher flower

New Select Mixture Improved All varieties in the series.



Revolution Deep Orange with Dark Eye

# Hit your schedule every time

Flower timing is synchronized across the colour range in each Revolution series, so your product flows smoothly. No surprises...you grow, pick, pack and ship just as you planned. High uniformity enables a consistent, fully programmable, high-density crop year-round.

# **Revolution™ Series F**1

**Height:** 4 to 8 in./10 to 20 cm **Spread:** 10 to 12 in./25 to 30 cm **Flower size:** 3 to 4 in./8 to 10 cm

Seed supplied as: Coated

Plug crop time: 6 to 7 weeks Transplant to finish: 8 to 10 weeks

- When it comes to uniformity of flowering window across a complete colour range, Revolution is the leading standard-size pot gerbera.
- Industry-leading seed quality.
- Better second flush of flowers than the competition assures much longer bloom time for the consumer.
- Best for 5-in./13-cm pots.

**New Deep Orange with Dark Eye** More compact variety has a good, deep orange colour.



# Stays tidy for smaller pots

ColorBloom stays compact, so it won't get too full or leafy, allowing the colourful blooms to show through in quarts/11-cm pots. Faster to flower by around 10 days, ColorBloom beats the competition to market. And, first-time plant buyers will love the exciting, non-fading colours and easy care of this indoor/outdoor plant.



**Height:** 4 to 6 in./10 to 15 cm **Spread:** 6 to 8 in./15 to 20 cm **Flower size:** 3 to 4 in./8 to 10 cm

Seed supplied as: Coated

Plug crop time: 6 to 7 weeks Transplant to finish: 6 to 10 weeks

- The ColorBloom series is specially designed for the quart/ 11-cm retail market.
- ColorBloom is the most uniform series on the market, with the best performance for consumers.
- The series is around 10 days faster to flower than competitors.
- More uniform with a shorter flower window.
- It has a higher amount of usable plants due to better seed quality.
- Offers a compact plant habit that requires less to no PGRs.
- Series holds its colour better and won't fade in high light.

**New Red with Dark Eye** More uniform in colour and around one week earlier to flower than competing reds.

**New White with Dark Eye** Clear white and uniform in colour.

New Mixture Improved Includes all varieties in the series. Note that Bicolor Orange Yellow is slightly later to flower than the rest of the varieties.



ColorBloom Red with Dark Eye Gerbera



ColorBloom White with Dark Eye Gerbera



ColorBloom Mixture Improved Gerbera



Kosmo Orange Celosia



CELOSIA O

CELOSIA Celosia spicata

# **Kosmo Series**

**Height:** 8 in./20 cm **Spread:** 8 to 10 in./20 to 25 cm

Seed supplied as: Pelleted

Plug crop time: 3 to 4 weeks Transplant to finish: 9 to 11 weeks

- Genetically dwarf series for year-round pot and pack programs needs no PGRs or pinching.
- Produces a main stem at the base with many side spikes; flower heads top well-proportioned leaves.
- Short production time, long retail shelf life and excellent garden performance.

**New Orange** Brings a bright orange colour to the series.

**New Mixture Improved** Includes NEW Orange.

# New!

All our celosia varieties are now available in **pelleted form.** 

# CUT FLOWERS

Focal These are the largest blooms in the arrangement...the varieties that make customers go "aah!" Be sure to check out our centre-ofattention lisianthus.

Filler These transitional varieties have clusters of individual flowers on a single stem or flower head, and are used to fill in spaces between the Focal and Line flowers. Examples include dianthus and trachelium.

Line These showy flowers add height and width to the arrangements, and are used to define the shape and direction. Many – like snapdragons and matthiola – feature flowers held close to the stem.

Volume Secondary to the focal flowers, blooms like matthiola and dianthus provide a dense burst of colour and add mass to the bouquet.

PRODUCTION GUIDE						
Class/Variety	Greenhouse	High Tunnel	Field			
ANEMONE						
Mona Lisa® Series F1	X	Х				
GRASS PANICUM						
New Frosted Explosion	Х	Х	Х			
LISIANTHUS						
Can Can Purple F1	Х	Х				
Flare Series F1	Х	Х				
MATTHIOLA						
Aida Series	Х					
SNAPDRAGON						
Maryland Series F1	Х	Х				
Potomac™ Series	Х	Х				

See the full chart of all PanAmerican Seed cut flowers on page 199 of the 2020-2021 Catalogue.

FLORAL SELECTION GUIDE FOR BOUQUETS						
Class/Variety	Focal	Filler	Line	Volume		
ANEMONE						
Mona Lisa® Series F1	Х					
GRASS PANICUM						
New Frosted Explosion		Х				
LISIANTHUS						
Can Can Purple F1	Х			Х		
Flare Series F1	Х			Х		
MATTHIOLA						
Aida Series			Х	Х		
SNAPDRAGON						
Maryland Series F1			Х			
Potomac™ Series			Х			

See the full chart of all PanAmerican Seed cut flowers on page 179 of the 2020-2021 Catalogue.



Mona Lisa Orchid Shades Improved Anemone

ANEMONE 

Anemone coronaria

# Mona Lisa® Series F1

**Height:** 18 in./46 cm **Flower size:** 4 to 4.5 in./10 to 11 cm

Seed supplied as: Raw

Planting density: 2 to 4 plants/ft.<sup>2</sup> (22 to 44 plants/m<sup>2</sup>)

Best for: Greenhouse, high tunnel

Plug crop time: 8 weeks Transplant to finish: 12 weeks

- A masterpiece among anemones: Mona Lisa puts out up to 18 flowers per plant...flowers under lower Winter light levels... doesn't need staking, netting or disbudding.
- 4 to 4.5-in./10 to 11-cm blooms top sturdy 18-in./46-cm stems that are ideal for cutting and design work.
- Well-suited for young plant production from March to April sowing.
- Low temperatures (46 to 54°F/8 to 12°C) promote optimum stem length for cut flower production.

New Orchid Shades Improved Improved germination and uniformity over original Orchid Shades, with similar colour shades and crop time.



**Frosted Explosion Grass Panicum** 

GRASS PANICUM O

# **New Frosted Explosion**

Height: 24 to 30 in./61 to 76 cm

**Seed supplied as:** Multi-Seed

Planting density: 2 to 3 plants/ft.<sup>2</sup>

(25 to 32 plants/m<sup>2</sup>)

Best for: Greenhouse, high tunnel, field

Plug crop time: 4 to 5 weeks Transplant to finish: 8 to 12 weeks

- This easy-to-grow grass adds a delicate texture to any bouquet.
- Facultative short day flowering response; daylength extension is recommended where appropriate to ensure good stem length.
- Harvest stems when seed heads are green all the way to bronze tinged.
- Stems last 10 to 14 days in a vase.



**Can Can Purple Lisianthus** 

# LISIANTHUS

Eustoma grandiflorum

# **New Can Can Purple F**1

Height: 36 to 45 in./91 to 114 cm

Seed supplied as: Pelleted

Planting density: 8 plants/ft.<sup>2</sup> (84 plants/m<sup>2</sup>) Summer; 6 plants/ft.<sup>2</sup> (64 plants/m<sup>2</sup>) Winter Best for: Greenhouse, high tunnel

Plug crop time: 8 to 10 weeks Transplant to finish: Winter, 14 to 18 weeks; Spring/Autumn, 12 to 14 weeks; Summer, 10 to 12 weeks

- A later-flowering, spray-type lisianthus with a highly filled flower in a deep purple-blue colour.
- Produces a spray of flowers on the top of each stem that opens within a short window, giving a bouquet effect to every stem.
- Labour savings with no pinching needed.
- Full spray effect may reduce the number of stems needed for floral arrangements.



Flare Jade Lisianthus



Flare Yellow Lisianthus

F1 DOUBLE-FLOWERED LISIANTHUS

# Flare Series F1

**Height:** 36 to 45 in./91 to 114 cm

Seed supplied as: Pelleted

Planting density: 8 plants/ft.<sup>2</sup> (84 plants/m<sup>2</sup>) Summer; 6 plants/ft.<sup>2</sup> (64 plants/m<sup>2</sup>) Winter **Best for:** Greenhouse, high tunnel

Plug crop time: 8 to 10 weeks Transplant to finish: Winter, 14 to 18 weeks; Spring/Autumn, 12 to 14 weeks; Summer, 10 to 12 weeks

- The best spray-type lisianthus series - Flare produces a spray of flowers on the top of each stem that opens within a short window, giving a bouquet effect to every stem.
- Labour savings, thanks to no pinching needed.
- Full spray effect may reduce the number of stems needed for floral arrangements.

**New Jade** New light green option for the series.

**New Yellow** New light yellow option for the series.



Aida Purple Matthiola

NORTHERN GREENHOUSE SELECTABLE MATTHIOLA (STOCK)

MATTHIOLA 
Matthiola incana

# **Aida Series**

(Spring Flowering, Group 2)

Height: 32 in./81 cm Seed supplied as: Raw Stem length: 32 in./81 cm

Planting density: 6 plants/ft.2 (64 plants/m<sup>2</sup>)

Best for: Greenhouse

Plug crop time: 5 to 6 weeks

Transplant to finish: Winter, 11 to 12 weeks; Spring, 8 to 9 weeks;

Summer, 6 to 8 weeks; Autumn, 4 to 7 weeks

The Aida Series is bred specifically for Spring performance.

NOTE: Selectable matthiola will produce approximately 50% double-flowering types, but it is easy to select out the single-flowered types at the young plant stage. Refer to the PanAmerican Seed Product Information Guide at panamseed.com for details.

**New Purple** New deep purple option for the series.



Maryland Rose (1,2)

# **SNAPDRAGON** O Antirrhinum majus

, ununtilinanti inajas

Maryland Series F1

(Group 1,2)

Height: 39 to 60 in./99 to 152 cm

Seed supplied as: Raw

Stem Length: 39 to 60 in./

99 to 152 cm

**Planting density:** 6 to 10 plants/ft.<sup>2</sup> (64 to 106 plants/m<sup>2</sup>); high-density planting under high-light or field situation

Best for: Greenhouse, high tunnel

Plug crop time: 4 to 5 weeks Transplant to finish: 8 to 10 weeks; less than optimal crop season may affect finishing time for a duration of up to 18 weeks; refer to the PanAmerican Seed Product Information Guide at panamseed.com for details

- Energy-efficient series is your best choice for cool-season, low-light and low-temperature conditions.
- Group with other Group 1,2 varieties (Cool, Purple Twist and Red Delilah) for Autumn, Winter and Spring programs.
- Well-defined flower spikes are produced on sturdy, clean stems.

**New Rose** The addition of this colour allows for a year-round production program when coupled with the Monaco and Potomac series.

# Snaps second to none

PanAmerican Seed is the world leading supplier of F<sub>1</sub> forcing snaps, with an unsurpassed choice of top-producing varieties selected for stem and flower quality, photoperiodic response and earliness to flower. With selections like popular Potomac, you'll find it a "snap" to build an all-year program of successful growing.







Potomac Red Improved (3,4)

# Potomac™ Series F<sub>1</sub>

(Group 3,4)

Height: 39 to 60 in./99 to 152 cm

Seed supplied as: Raw

Stem length: 39 to 60 in./

99 to 152 cm

**Planting density:** 6 to 10 plants/ft.<sup>2</sup> (64 to 106 plants/m<sup>2</sup>); high-density planting under high-light or field situation

Best for: Greenhouse, high tunnel

Plug crop time: 4 to 5 weeks Transplant to finish: 8 to 10 weeks; less than optimal crop season may affect finishing time for a duration of up to 18 weeks; refer to the PanAmerican Seed Product Information Guide at panamseed.com for details

- Tops for production during periods of high light, long days and warm temperatures.
- Plants produce tall, strong stems and long spikes with good flower quality.
- Can be grown year-round with supplemental high-intensity light.

**New Pink Improved** Features thicker bud taper, better colour saturation and hybrid uniformity.

**New Red Improved** Offers a richer red colour, a more robust flower spike and earlier flowering that is more in line with the series.



Potomac Pink Improved (3,4)



# HANDPICKED VEGETABLES & HERBS

# HANDPICKED VEGETABLES & HERBS / EGGPLANT & SQUASH



Asian Delite Eggplant

**EGGPLANT** O Solanum melongena

# New Asian Delite F1

Height: 24 to 42 in./61 to 107 cm **Spread:** 24 to 36 in./61 to 91 cm

Seed supplied as: Raw

Class: Elongated Size: Medium Habit: Upright

Fruit Characteristics: Bright purple skin, semi-spineless

Calyx Colour: Green and black

Baby Fruit Size: 5-7 in./13-18 cm long x 1 in./3 cm wide Full Fruit Size: 9-12 in./23-30 cm long x 1.5 in./4 cm wide

Days to maturity from transplant: 50-55 Production Method: Field, In-ground, Container

- Slender, elongated eggplants are glossy with bright purple skin and white, tender, non-bitter flesh.
- Fruit can be sliced lengthwise for grilling or lightly frying, and tender skin does not need to be peeled.
- Sliced or diced fruit is great for a stir-fry or curry; its non-bitter flavour and tender texture will complement any sauce.
- Plants are upright and semi-spineless, so they are very easy and painless to harvest.
- Great in an in-ground garden or large container.



**Autumn Frost Squash** 

# SQUASH O Cucurbita moschata

# New Autumn Frost F1

Height: 8 to 12 in./20 to 30 cm **Spread:** 120 to 144 in./305 to 366 cm

Seed supplied as: Raw

Class: Winter Squash Type: Specialty Round Habit: Medium Vine Exterior Colour: Dark tan

Fruit Size: 5-7 in./13-18 cm long x 5-6 in./13-15 cm wide Disease Resistance: Intermediate resistance to Powdery mildew

Days to maturity from direct seed: 100-105 Production Method: Field, In-ground

- Uniquely ribbed, round fruit ripens to dark tan with a frosted overlay.
- Fruit is similar in taste to a butternut squash, with superior quality, rich flavour and a shelf life of up to 4 months after maturity, allowing for a supply of high-quality fruit throughout the Winter season.
- Fruit can be prepared like a winter squash; cut lengthwise or cut the top 2 in./5 cm off, scoop seeds out and roast; perfect for stuffing.
- Best grown in-ground.

# HANDPICKED VEGETABLES & HERBS / PEPPER

		Fresh Market			Home Garden	
Class/Variety	Field	Hydroponic	Protected Culture	In-ground	Container	
EGGPLANT						
New Asian Delite F1	X			X	X	
SQUASH						
New Autumn Frost F1	X			X		
PEPPER						
New PeppiGrande Red F1	X		X	X		
SIMPLYSALAD®						
New Pro San Mixture		X		X	X	
New Pro Tatu Mixture		X		X	Х	



PeppiGrande Red



PeppiGrande Red

PEPPER • Capsicum annuum

# **New PeppiGrande Red F1**

**Height:** 36 to 48 in./91 to 122 cm **Spread:** 24 to 36 in./61 to 91 cm

Seed supplied as: Raw

Type: Sweet Class: Corno

Habit: Large, tall, vigorous **Growth** Indeterminate

Fruit Size: 5-6 in./13-15 cm long x 1.5-2 in./4-5 cm wide

Fruit Colour: Ripens from green to red

Days to maturity from transplant: 60-65 green; 80-85 full ripe Production Method: Field, Protected Culture, In-ground

- Corno-shaped pepper has outstanding crisp texture, rich flavour and more sweetness than large-fruited peppers.
- Fruit is often seedless, which means less preparation time for chopping and cooking; great on the grill or baked stuffed with cheese.
- To produce seedless fruit, grow it in isolation from other (non-seedless) pepper varieties.
- If it is not isolated, it will produce larger, great-tasting fruit with just a few
- Best grown in-ground with support of stakes or a cage.



**Pro San Mixture** 

SIMPLYSALAD® 

• Brassica sp.

# **New Pro San Mixture**

Height: 8 to 12 in./20 to 30 cm Spread: 6 to 12 in./15 to 30 cm

Seed supplied as: Precision Multi-Pellets

Salad Class: Mixed Species

Suited For: Extended harvest multiple cuts, fresh cut, hydroponic, pot,

Days to maturity from direct seed: 25-45 Days to maturity from transplant: 15-30

Production Method: Hydroponic, In-ground, Container

- A mix of Asian greens mizuna and komatsuna that were selected for late bolting and uniform growth.
- Leaves have attractive lobed and serrated leaf shapes in bright purple and green shades.
- Classic flavour is perfect for salads or braising.
- Cut at junior leaf stage 25-35 days from sowing or at full leaf stage 35-45 days from sowing.
- Cut leaves 2 in./5 cm above soil level and foliage will re-grow to junior leaf size approximately 10 days later.



**Pro Tatu Mixture** 

# **New Pro Tatu Mixture**

Height: 8 to 12 in./20 to 30 cm **Spread:** 6 to 12 in./15 to 30 cm

Seed supplied as: Precision Multi-Pellets

Salad Class: Mixed Species

Suited For: Extended harvest multiple cuts, fresh cut, hydroponic,

pot, roots-on

Days to maturity from direct seed: 25-45 Days to maturity from transplant: 15-30

Production Method: Hydroponic, In-ground, Container

- A mixture of Asian mustard and komatsuna greens that were selected for late bolting and uniform growth.
- Leaves have attractive lobed and frilled leaf shapes in deep purple and bright green shades.
- Spicy flavour is perfect for salads or braising.
- Cut at a junior leaf stage 25-35 days from sowing or at full leaf stage 35-45 days from sowing.
- Cut leaves 2 in./5 cm above soil level and foliage will re-grow to junior leaf size approximately 10 days later.

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# PANAMERICAN SEED / TERMS & CONDITIONS OF SALE

# **ACCEPTANCE OF TERMS**

These terms and conditions shall govern orders for Goods placed with Seller. Purchaser acknowledges that these terms and conditions and Seller's proposal, if any, constitute the entire agreement between Seller and Purchaser and supersede any prior agreements and representations. Any prior or contemporaneous promises, agreements, negotiations or representations whether oral or written or created the custom, usage or course of dealing are also superseded by these terms and conditions. No modification of these terms and conditions shall be effective unless in writing signed by Seller. Placement of the order shall constitute Purchaser's acceptance of these terms and conditions. All orders are subject to acceptance by Seller at our corporate office. Any different or additional terms in any documents from Purchaser are objected to and rejected, are deemed to materially alter these terms, and will not become part of any contract between Seller and Purchaser.

# **PRICING**

Prices and availability are subject to Prices and availability are subject to change without notice. Although Seller tries to assure accuracy, it shall not be held responsible for typographical or other errors in the price list. Purchaser's price is determined by referring to the product price and deducting any discount for which Purchaser may qualify. Please contact your sales representative for more information.

### **TERMS**

All payments must be received before Goods are shipped unless otherwise agreed to in writing by Seller. Payment terms can be seen on your Order Confirmation or at the appropriate Terms & Conditions page at panamseed. com for North American, European and International credit-approved customers. A 2% per month finance charge (24% annual rate) will be added to all past due balances at the end of each month. Seller has no obligation to ship any Goods until payment in full is received.

# MINIMUM ORDERS

The minimum quantity listed in the price list for each variety is the minimum order for that variety. Seller reserves the right to fill orders using pre-packaged inventory when

# FREIGHT & HANDLING **CHARGES, INSPECTION, DAMAGED GOODS**

(a) The freight and handling charge on Purchaser's invoice covers shipment of the Goods to Purchaser's destination. Seller will pay to return damaged goods, for replacement Goods or provide Purchaser with a credit for damaged Goods if the steps listed in Section (b) below are followed. PURCHASER WILL NOT REFUSE TO RETURN DAMAGED OR DEFECTIVE GOODS, OR THE RIGHT TO FILE A CLAIM IS LOST AND PURCHASER WILL STILL BE LIABLE FOR THE MATERIAL AND THE FREIGHT.

(b) When Purchaser receives shipment, it shall immediately: 1) count all cartons; 2) inspect all cartons for external damage; 3) check for open or resealed cartons; 4) note any damages, shortages, open or resealed cartons on the delivery receipt; the carrier's representative must also sign the receipt; and 5) open all boxes immediately and inspect for damage, including, but not limited to, material shortages. PURCHASER MUST NOTIFY SELLER WITHIN TWO (2) BUSINESS DAYS IF A SHIPMENT IS

DAMAGED by calling its Customer Service Representative to report the damage and receive details on what is needed to file a claim. The Goods shall be deemed accepted by the Purchaser on the earlier of (a) notice of acceptance to Seller, or (b) ten (10) days after delivery. Any claims for shortage, non-delivery, damage or defect which would reasonably be discoverable in the course of such inspection shall be waived unless Purchaser notifies Seller in writing within ten (10) days after delivery of the goods to which the claim relates.

# **PACKAGING FEES**

All orders will be filled in bulk and/or predetermined packet sizes unless special packaging instructions are given. If special packaging is requested, a packaging fee will apply and additional time may be required to complete the order. Purchaser shall contact Customer Service if it requires additional details.

# **CUSTOM SEED TREATMENTS**

If a custom treatment is requested, a \$25 (U.S. Dollars) fee per batch will apply and additional time may be needed to complete the order.

# **PHYTOSANITARY CERTIFICATES CHARGE**

Depending on the Goods ordered by Purchaser, and the location of the Purchaser, Phytosanitary Certificates may be required to comply with government regulations. If the shipment requires Phytosanitary Certificates, an additional cost will be charged.

# **DELIVERY DATES**

Please indicate the required ship date when the order is being placed. No orders can be accepted without a requested ship date. All shipping and delivery dates provided by the Seller are approximate.

# **DELAYS, SHORTAGES & SUBSTITUTIONS**

Seller shall not be responsible for delays in delivery or for losses resulting from such delays. Seller reserves the right to make partial shipment. Seller will not be liable for any delay in performing or for partial or complete failure to perform hereunder if such delay or failure is due to fire, explosion, flood, Act of God, force majeure, accident, war, intervention of governmental authorities, strikes, labor disputes, material shortages, transportation delays, any act or omission of Purchaser, its agents or employees or any party retained by, through or under the control of Purchaser, or any other cause similar or dissimilar which is beyond Seller's reasonable control.

# **INSURANCE**

Seller does not insure shipments via Air Mail, but insures all other shipments in transit, in commercially reasonable

# **SHIPPING**

Any shipment outside of North America will be charged normal carrier rates.

# **RETURNS**

No Goods may be returned without first obtaining written authorization. Authorized returns will only be considered if they are in original, unopened Seller packages. All returns are subject to a 15% service charge.

No credit or replacement will be given for Goods returned after nine (9) months from the ship date.

Upon receiving authorization, returns can be shipped to:

PanAmerican Seed Attn: Returns 622 Town Road West Chicago, Illinois USA 60185-2698

### **SEED COUNT**

All seed counts given are approximate quantities due to variation based on a lot by lot comparison. Seed counts may also vary widely between colors and series.

#### NOTICE REGARDING SEED-BORNE DISEASES

Seller makes no representation regarding the freedom from seed-borne diseases of the seed sold and disclaims any liability relating to such diseases, whether previously known to exist or not identified until such seed is grown.

# RESERVATION OF OWNERSHIP

In the event of bankruptcy, products delivered by the Seller remain the property of Seller until the Purchaser has paid the purchase price amount. This reservation of ownership is also extended to claims that Seller may obtain towards Purchaser on account of the Purchaser's failure to meet their obligations to Sale.

# LIMITATION OF WARRANTY

Seller warrants, to the extent required by law, that Goods conform to the description appearing in Seller's catalog and on container labels, within recognized tolerances. THE FOREGOING WARRANTIES OTHER WARRANTIES NOT EXPRESSLY SET FORTH HEREIN, WHETHER EXPRESSED OR IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT.

# LIMITATION OF REMEDY

PURCHASER'S SOLE AND EXCLUSIVE REMEDY SHALL BE REFUND OF THE PURCHASE PRICE. SELLER'S LIABILITY, WHETHER FOR BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, PRODUCTS LIABILITY OR ANY OTHER THEORY OF LIABILITY, IS LIMITED TO THE AMOUNT OF THE PURCHASE PRICE. PURCHASER AGREES THAT IN NO EVENT, REGARDLESS OF THE FORM OF LEGAL ACTION OR THE THEORY OF RECOVERY, WILL SELLER BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT OR PUNITIVE DAMAGE INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR REVENUES.

# **USE RESTRICTION**

Merchandise is not intended for sale to large-scale commercial growers of herbs or vegetables. Use, transfer and/or acquisition of merchandise constitutes acceptance of a limited right to use the merchandise solely to grow a single crop for food, feed, processing or ornamental purposes. No other use is permitted. Any transfer of merchandise must be accompanied by this use restriction.

# MANDATORY ARBITRATION

ANY CLAIM WHICH PURCHASER MAY HAVE AGAINST SELLER ARISING OUT OF OR RELATING TO THE SALE OF THE GOODS HEREUNDER MUST BE BROUGHT, IF AT ALL, WITHIN TWELVE (12) MONTHS OF THE DELIVERY OF THE GOODS WHICH ARE THE SUBJECT OF THE CLAIM AND SHALL BE SETTLED BY BINDING ARBITRATION IN ACCORDANCE WITH THE COMMERCIAL ARBITRATION RULES OF THE AMERICAN ARBITRATION ASSOCIATION, SAID ARBITRATION TO BE VENUED IN COOK OR DUPAGE COUNTIES, ILLINOIS.

# **GOVERNING LAW, JURISDICTION & VENUE**

The laws of the State of Illinois, including but not limited to the Uniform Commercial Code as adopted therein, shall govern all

matters arising out of or relating to Seller's sale of merchandise. ANY DISPUTE NOT SUBJECT TO ARBITRATION AND ANY ACTION TO ENFORCE AN ARBITRATION AWARD ARISING OUT OF OR RELATING TO THE SALE OF MERCHANDISE HEREUNDER SHALL BE MAINTAINED IN THE STATE OR FEDERAL COURTS LOCATED IN DUPAGE OR COOK COUNTIES, ILLINOIS, AND PURCHASER SUBMITS TO THE JURISDICTION OF AND VENUE IN SAID COURTS.

#### **INDEMNITY**

By accepting the Goods, Purchaser agrees to indemnify, defend and hold harmless Seller, its affiliates, successors and assigns from and against any claim or liabilities, claims, demands, damages, losses and expense (including attorney's fees) asserted by any or all transferees of such Goods or users of the products of such Goods (i) arising from any act or omission of Customer or its employees or agents, or (ii) who were not notified by Purchaser in writing of Limitation of Warranty, Limitation of Remedy, Mandatory Arbitration, Governing Law, Jurisdiction and Venue, and Notice Regarding Seed-Borne Diseases, in language substantially equivalent to that contained in these Terms and Conditions of Sale.

# **TRADEMARKS**

Trademarks are and shall remain the property of Ball Horticultural Company, unless otherwise indicated. Nothing herein shall grant Purchaser a license to use any such trademark.

# **SALE LIMITATIONS**

EXPORT CONTROL. PANAMERCIAN SEED PRODUCTS ARE NOT AVAILABLE FOR SALE IN AND MAY NOT BE RESOLD INTO AUSTRALIA, NEW ZEALAND KOREA, BRAZIL AND SOUTH AFRICA. THE COMPANY'S PRODUCTS MAY NOT BE SOLD, DIVERTED, TRANSFERRED OR RE-EXPORTED, DIRECTLY OR INDIRECTLY, TO ANY INDIVIDUAL ENTITY, OR DESTINATION THAT IS SUBJECT TO UNITED STATES OR UNITED NATIONS SANCTIONS PROGRAMS OR EMBARGOES (INCLUDING, BUT NOT LIMITED TO, OFAC SANCTIONS PROGRAMS AND THOSE LISTED ON OFAC'S "SPECIALLY DESIGNATED NATIONALS" LIST) WITHOUT AN APPROPRIATE EXPORT LICENSE.

FOREIGN CORRUPT PRACTICES ACT. EACH PARTY REPRESENTS AND WARRANTS TO THE OTHER PARTY THAT IT WILL TAKE NO ACTION IN RELATION TO THIS TRANSACTION THAT WOULD BE IN VIOLATION OF THE APPLICABLE LAWS AND REGULATIONS OF ANY COUNTRY AND THE UNITED STATES OF AMERICA. NO PAYMENTS OF MONEY OR ANYTHING OF VALUE WILL BE OFFERED, PROMISED OR PAID, DIRECTLY OR INDIRECTLY, TO ANY OFFICIALS TO INFLUENCE THE ACTS OF SUCH OFFICIALS TO INDUCE THEM TO USE THEIR INFLUENCE WITH A GOVERNMENT OR AN INSTRUMENTALITY THEREOF, OR TO OBTAIN AN IMPROPER ADVANTÁGE.

# **IMAGES**

High and low-resolution digital images

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